



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0976; Product Identifier 2019-NM-177-AD; Amendment 39-19871; AD 2020-05-21]

RIN 2120-AA64

Airworthiness Directives; Yaborã Indústria Aeronáutica S.A. (Type Certificate Previously Held by Embraer S.A.) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Yaborã Indústria Aeronáutica S.A. (Type Certificate Previously Held by Embraer S.A.) Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes. This AD was prompted by a report of erroneous indications of certain engine parameters and reports of “pitch up” and “pitch down” uncommanded attitudes with autopilot engaged in cruise flight. This AD requires installing updated PRIMUS EPIC LOAD software, as specified in an Agência Nacional de Aviação Civil (ANAC) Brazilian AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For the material incorporated by reference (IBR) in this AD, contact National Civil Aviation Agency, Aeronautical Products Certification Branch (GGCP), Rua Laurent Martins, nº 209, Jardim Esplanada, CEP 12242-431 – São José dos Campos - SP, Brazil; telephone 55 (12) 3203-6600; email pac@anac.gov.br; Internet www.anac.gov.br/en/. You may find this IBR material on the ANAC website at <https://sistemas.anac.gov.br/certificacao/DA/DAE.asp>. You may view this IBR material at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0976.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0976; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Krista Greer, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3221; email Krista.Greer@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The ANAC, which is the aviation authority for Brazil, has issued Brazilian AD 2019-10-01, effective October 21, 2019 (“Brazilian AD 2019-10-01”) (also referred to as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Yaborã Indústria Aeronáutica S.A. (Type Certificate Previously Held by Embraer S.A.) Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -100 SR, -200 STD, -200 LR, and -200 IGW airplanes. Model ERJ 190-100 SR airplanes are not certified by the FAA and are not included on the U.S. type certificate data sheet; this AD therefore does not include those airplanes in the applicability.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Yaborã Indústria Aeronáutica S.A. (Type Certificate Previously Held by Embraer S.A.) Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -100 SR, -200 STD, -200 LR, and -200 IGW airplanes. The NPRM published in the Federal Register on December 17, 2019 (84 FR 68824). The NPRM was prompted by a report of erroneous indications of certain engine parameters and reports of “pitch up” and “pitch down” uncommanded attitudes with autopilot engaged in cruise flight. The NPRM proposed to require installing updated PRIMUS EPIC LOAD software, as specified in an ANAC Brazilian AD.

The FAA is issuing this AD to address erroneous indications of certain engine parameters and reports of uncommanded attitudes with autopilot engaged in cruise flight, which could interfere with the decisions taken by the flight crew during takeoff and landing and possibly result in reduced controllability of the airplane. See the MCAI for additional background information.

Explanation of Change to Manufacturer's Name

This AD identifies the manufacturer's name as published in the most recent type certificate data sheet for the affected models.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA has considered the comment received. The Air Line Pilots Association, International (ALPA) indicated its support for the NPRM.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule with the change described previously and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related IBR Material under 1 CFR Part 51

Brazilian AD 2019-10-01 describes procedures for installing updated PRIMUS EPIC LOAD software. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 107 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
9 work-hours X \$85 per hour = \$765	\$0	\$765	\$81,855

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2020-05-21 Yaborã Indústria Aeronáutica S.A. (Type Certificate Previously Held by Embraer S.A.). Amendment 39-19871; Docket No. FAA-2019-0976; Product Identifier 2019-NM-177-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Yaborã Indústria Aeronáutica S.A. (Type Certificate Previously Held by Embraer S.A.) Model ERJ 190-100 STD, -100 LR, -100 ECJ, -100 IGW, -200 STD, -200 LR, and -200 IGW airplanes, as identified in Agência Nacional de Aviação Civil (ANAC) Brazilian AD 2019-10-01, effective October 21, 2019 (“Brazilian AD 2019-10-01”).

(d) Subject

Air Transport Association (ATA) of America Code 31, Indicating/recording systems.

(e) Reason

This AD was prompted by a case of erroneous indications of the engine parameters N1, N2, and ITT from both engines due to the design of data communication of the full authority digital engine control (FADEC) 1 and 2 with the engine indicating and crew alerting system (EICAS) display, which could result in interference with decisions that must be taken by the flight crew during takeoff. This AD was also

prompted by reports of “pitch up” and “pitch down” uncommanded attitudes with autopilot engaged in cruise flight, which could occur in “Autoland” mode during landing. The FAA is proposing this AD to address these conditions, which could interfere with the decisions taken by the flight crew during takeoff and landing and possibly result in reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, Brazilian AD 2019-10-01.

(h) Exceptions to Brazilian AD 2019-10-01

(1) Where Brazilian AD 2019-10-01 refers to its effective date, this AD requires using the effective date of this AD.

(2) The “Alternative method of compliance (AMOC)” section of Brazilian AD 2019-10-01 does not apply to this AD.

(3) Where paragraph (d) of Brazilian AD 2019-10-01 specifies you must use certain service information for software installation, this AD specifies to use that service information as applicable, except as provided in paragraphs (a)(1) through (6) of Brazilian AD 2019-10-01.

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Section, Transport Standards Branch, FAA, has the authority to approve AMOCs for this

AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Section, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or ANAC; or ANAC's authorized Designee. If approved by the ANAC Designee, the approval must include the Designee's authorized signature.

(j) Related Information

For more information about this AD, contact Krista Greer, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3221; email Krista.Greer@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Agência Nacional de Aviação Civil (ANAC) Brazilian AD 2019-10-01, effective October 21, 2019.

(ii) [Reserved]

(3) For information about ANAC Brazilian AD 2019-10-01, contact National Civil Aviation Agency, Aeronautical Products Certification Branch (GGCP), Rua Laurent Martins, nº 209, Jardim Esplanada, CEP 12242-431 – São José dos Campos - SP, Brazil; telephone 55 (12) 3203-6600; email pac@anac.gov.br; Internet www.anac.gov.br/en/.

(4) You may view this material at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0976.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 4, 2020.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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